

REMARKS

Claims 1-3 have been rejected in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Reese (U.S. Pat. No. 4,375,978). This rejection is respectfully traversed.

At the outset, Applicant wishes to note that Claim 1, as amended, claims "each of said plurality of support brackets extending inwardly toward the other of said pair of longitudinally extending tubular members; a pair of central stationary members fixedly coupled to said pair of longitudinally extending tubular members via said plurality of support brackets such that said pair of central stationary members are positioned inboard of and offset from said generally rectangular assembly; and a pair of outboard movable members movably coupled to said pair of longitudinally extending tubular members via said plurality of support brackets such that said pair of central stationary members are positioned inboard of and offset from said generally rectangular assembly". As illustrated in FIG. 1, the plurality of support brackets are disposed in such a way as to position the pair of central stationary members and the pair of outboard movable members sufficiently inboard so as to prevent the glass disposed on the bending rings from extending outboard of the footprint of the generally rectangular assembly. In this regard, the glass is prevented from contacting adjacent bending rings

or other structure in the bending furnace due to the offset afforded by the plurality of support brackets.

However, on the other hand, Reese teaches a bending ring having support rods that are fixedly mounted directly to the rectangular frame. This arrangement does not provide the presently claimed offset of the shaping bending sections 10. Accordingly, during use, the glass that must overhang any bending ring will extend outside the footprint of the rectangular base, thereby exposing the glass to contact with other glass on adjacent rings and possible damage. Therefore, it is clear that Reese fails to teach or suggest a plurality of support brackets extending inwardly toward the opposing longitudinally extending tubular member. Reconsideration and withdrawal of the present rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Reese (U.S. Pat. No. 4,375,978) in view of DeAngelis (U.S. Pat. No. 4,119,428). This rejection is respectfully traversed.

In addition to the arguments set forth above in connection with Reese, Applicant respectfully submits that DeAngelis fails to cure the deficiencies of Reese, in that DeAngelis fails to teach or suggest a plurality of support brackets extending inwardly toward the opposing longitudinally extending tubular member.

Still further, the Examiner states that it would have been obvious "to utilize the teachings of DeAngelis to modify the mold reinforcing frame as set forth in Reese above by fixedly coupling gussets between adjacent tubular members." However, Applicant

respectfully submits that the currently pending claim limitation requires not just a “gusset”, but a “square-shaped tubular gusset.”

Applicant submits that any combination of Reese and DeAngelis fails to teach or suggest the use of a square-shaped tubular gusset. As discussed in the present application, it is desirable during manufacturing that the glass sheets are heated as quickly as possible to increase the throughput of the forming system. Therefore, heat must be imparted upon the glass sheets as efficiently as possible to minimize the heating cost and cycle time. The mass of conventional bending rings inhibits the desirable rapid heating of the glass. That is, due to the mass of the conventional bending ring, the bending ring has a high thermal capacity and requires enormous heat input to raise its temperature to that of the furnace. In the case of the DeAngelis bending ring, the support gusset is made of flat, solid members that naturally has a higher thermal mass compared to the hollow square-shaped tubular gusset of the present application—that is, a square shaped member has less thermal mass compared to a solid member when both are designed to support the same forces (square members having thinner walls because structural integrity is gained from the shape relative to solid members).

It would be improper to simply substitute the flat, solid, support gusset of DeAngelis with a square-shaped tubular member because DeAngelis is completely silent with regard to the benefits of using a square-shaped tubular member. As described above, one such benefit of using the square-shaped tubular gussets is reduced thermal mass for equivalent structural integrity—not improved structural durability and rigidity, as the Examiner states. Therefore, if the Examiner chooses to

maintain to the present rejection, Applicant requires such teachings in the references themselves or known in the art to be clearly enumerated in the rejection.

Notwithstanding, Applicant respectfully submits that Reese and DeAngelis, singly or in combination, fail to teach or suggest the claimed invention. Reconsideration and withdrawal of the present rejection are respectfully requested.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Reese (U.S. Pat. No. 4,375,978) in view of Black (U.S. Pat. No. 3,248,201). This rejection is respectfully traversed.

In addition to the arguments set forth above in connection with Reese, Applicant respectfully submits that Black fails to cure the deficiencies of Reese, in that Black fails to teach or suggest a plurality of support brackets extending inwardly toward the opposing longitudinally extending tubular member. Reconsideration and withdrawal of the present rejection are respectfully requested.

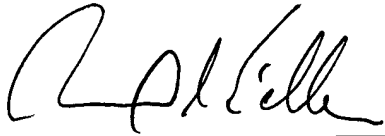
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner

believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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